

PTO/SB/20 (05-06)

Approved for use through XX/XX/XXXX. OMB 0651-00XX

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REQUEST FOR PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM BETWEEN THE JPO AND THE USPTO

Application No.:	10/600,449	First Named Inventor:	Masao Watanabe
Filing Date:	June 23, 2003	Attorney Docket No.:	03560.003315.
Title of the Invention:	IMAGE FORMATION SYSTEM		

THIS REQUEST FOR PARTICIPATION IN THE PPH PILOT PROGRAM MUST BE FAXED TO:
THE OFFICE OF THE COMMISSIONER FOR PATENTS AT 571-273-0125 DIRECTED TO THE ATTENTION OF MAGDALEN GREENLIEF

APPLICANT HEREBY REQUESTS PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM AND PETITIONS TO MAKE THE ABOVE-IDENTIFIED APPLICATION SPECIAL UNDER THE PPH PILOT PROGRAM.

The above-identified application validly claims priority under 35 U.S.C. 119(a) and 37 CFR 1.55 to one or more corresponding JPO application(s).

The JPO application number(s) is/are: 2002-193598

The filing date of the JPO application(s) is/are: 07/02/2002

I. List of Required Documents:

- a. A copy of all JPO office actions (including "Decision to Grant a Patent") in the above-identified JPO application(s).

☒ Is attached.

☐ Is available via Dossier Access System. Applicant hereby requests that the USPTO obtain these documents via the Dossier Access System.

- b. A copy of all claims which were determined to be patentable by the JPO in the above-identified JPO application(s).

☒ Is attached.

☐ Is available via Dossier Access System. Applicant hereby requests that the USPTO obtain these documents via the Dossier Access System.

- c. English translations of the documents in a. and b. above along with a statement that the English translations are accurate are attached.

- d. Information disclosure statement listing the documents cited in the JPO office actions is attached.


Copies of all documents are attached except for U.S. patents or U.S. patent application publications.

See Information Disclosure Statement dated November 29, 2006

This collection of information is required by 35 U.S.C. 119, 37 CFR 1.55, and 37 CFR 1.102(d). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. FAX COMPLETED FORMS TO: Office of the Commissioner for Patents at 571-273-0125, Attention: Magdalen Greenlief.

**REQUEST FOR PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM
BETWEEN THE JPO AND THE USPTO**

(continued)

Application No.:	10/600,449	First Named Inventor:	Masao Watanabe
II. Claims Correspondence Table:			
Claims in US Application	Patentable Claims in JP Application	Explanation regarding the correspondence	
1 to 8	34 to 41	In each case, the respective claims are the same except for claim format.	
9	42	Both claims are the same.	
10 to 29	43 62	In each case, the respective claims are the same except for claim format.	
III. All the claims in the US application sufficiently correspond to the patentable/allowable claims in the JPO application.			
IV. Payment of Fees:			
The Commissioner is hereby authorized to charge the petition fee under 37 CFR 1.17(h) as required by 37 CFR 1.102(d) to <input checked="" type="checkbox"/> Deposit Account No. <u>60-1205</u> .			
<input type="checkbox"/> Credit Card. Credit Card Payment Form (PTO-2038) is attached.			
Signature 		Date December 1, 2006	
Name (Print/Typed) Frank L. Cire		42,419 Registration Number	

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

FITZPATRICK, CELLA, HARPER & SCINTO

650 Town Center Drive
Suite 1600
Costa Mesa, California 92626-7130
(714)540-8700
Facsimile:(714)540-9823

FACSIMILE COVER SHEET

TO: U.S. Patent and Trademark Office
Attn: Magdalen Greenlief

FROM: Frank L. Cire, Reg. No. 42,419; Direct Line: 714-540-1763

RE: Request for PPH Pilot Program in U.S. Application No. 10/600,449
Atty. Docket No. 03560.003315.

FAX NO.: 571-273-0125

DATE: December 1, 2006 **NO. OF PAGES:** 96
(including cover page)

TIME: 9:55am **SENT BY:** SA

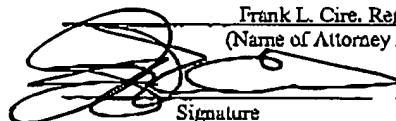
MESSAGE

Attached hereto are the following papers: (1) Request For Participation in PPH Pilot Program (Form PTO/SB/20); (2) Preliminary Amendment; (3) Copy of Claims in JP 2002-193598 (w/translation); (4) Copy of Decision To Grant A Patent (w/translation); (5) Copy of 10/11/2005 Amendment (w/translation); (6) Copy of 10/11/05 Argument (w/translation); (7) Copy of 08/05/2005 Notification Of Reason For Refusal (w/translation); (8) Copy of Verified Translation of Documents Concerning Japanese Patent Application.

I hereby certify that this correspondence is being transmitted via facsimile
to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-
1450, (571) 273-8300. on

December 1, 2006
(Date of Deposit)

Frank L. Cire, Reg. No. 42,419
(Name of Attorney for Applicant)



Signature

December 1, 2006
Date of Signature

**IF YOU DO NOT RECEIVE ALL THE PAGES
PLEASE CALL 714-540-8700 AS SOON AS POSSIBLE.**

Note: We are transmitting from a Canon Model FAX-L770 (compatible with any
Group I, Group II or Group III machine).

THIS FACSIMILE MESSAGE AND ACCOMPANYING DOCUMENTS ARE INTENDED ONLY FOR THE USE OF THE ADDRESSEE INDICATED ABOVE. INFORMATION THAT IS PRIVILEGED OR OTHERWISE CONFIDENTIAL MAY BE CONTAINED THEREIN. IF YOU ARE NOT THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, REVIEW OR USE OF THIS MESSAGE, DOCUMENTS OR INFORMATION CONTAINED THEREIN IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS MESSAGE IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE OR FACSIMILE AND MAIL THE ORIGINAL TO US AT THE ABOVE ADDRESS. THANK YOU.

03560.003315.

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
	:	Examiner: N/Y/A
MASAO WATANABE)	
	:	Group Art Unit: 2622
Application No.: 10/600,449)	
	:	Confirmation No.: 7213
Filed: June 23, 2003)	
	:	
For: IMAGE FORMATION)	
SYSTEM	:	December 1, 2006

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

LETTER SUBMITTING PAPERS UNDER PPH PILOT PROGRAM

Sir:

Applicant hereby requests accelerated examination of the above-identified application under the Patent office's Patent Prosecution Highway (PPH) Pilot Program based on allowed claims of Japanese Application No. 2002-193598 from which the present application claims priority under 35 U.S.C. § 119. Submitted herewith are the following documents for the accelerated examination:

- (1) Request For Participation in PPH Pilot Program (Form PTO/SB/20)
- (2) Preliminary Amendment
- (3) Copy of claims in JP 2002-193598 (w/English Translation)
- (4) Copy of Decision To Grant A Patent (w/English Translation)

I hereby certify that this correspondence is being transmitted via facsimile to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, (571) 273-8300, on

December 1, 2006
(Date of Deposit)

Frank L. Cira, Reg. No. 42,419
(Name of Attorney for Applicant)

Signature

December 1, 2006
Date of Signature

- (5) Copy of October 11, 2005 Amendment (w/English Translation)
- (6) Copy of October 11, 2005 Argument (w/English Translation)
- (7) Copy of August 5, 2005 Notification Of Reason For Refusal (w/English Translation)
- (8) Copy of Verified Translation Of Documents Concerning Japanese Patent Application.

References were cited during the prosecution of Japanese Application No. 2002-193598, but these references have already been disclosed in the subject application in an Information Disclosure Statement dated November 29, 2006. Accordingly, no Information Disclosure Statement accompanies this filing.

While it is not believed that a separate Petition to make special is required and that the Request (document 1) fulfills the requirements for such a petition, should the Office determine that a separate Petition is required, this Letter should be treated as a Petition to make the application special under the Office's PPH Pilot Program. As set forth in the Request, the Petition fee should be charged to Deposit Account 06-1205.

Applicant's undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



Frank L. Cire
Attorney for Applicant
Registration No. 42,419

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3800
Facsimile: (212) 218-2200

CA_MAIN 124018v1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of
Inventor: Masao WATANABE
Application No. 10/600,449
Title: IMAGE FORMATION SYSTEM

VERIFIED TRANSLATION OF DOCUMENTS CONCERNING JAPANESE PATENT APPLICATION

The undersigned, of the below address, hereby certifies that he/she well knows both the English and Japanese Languages, and that the attached are accurate translations of the documents listed below concerning Japanese Patent Application No. 2002-193598:

Notification of Reason for Refusal
Argument
Amendment
Decision to Grant a Patent
Final Claims

Signed this 14th day of November, 2006

Signature: Tomoko Kaga
Name: Tomoko KAGA
Address: 8-1, Suigu, Fujimino-shi, Saitama-ken,
356-0020 Japan

Japanese Patent No. 3793120

[Claims]

[Claim 1]

An image formation system including a color image formation apparatus and a black-and-white image formation apparatus, the image formation system comprising:

color image forming means for forming a color image using the color image formation apparatus;

black-and-white image forming means for forming a black-and-white image using the black-and-white image formation apparatus;

determining means for determining whether each of pages in an input job in which both a color page and a black-and-white page exist is a color page or a black-and-white page;

controlling means for controlling the color image forming means to form an image for the color page and controlling the black-and-white image forming means to form an image for the black-and-white page according to the determination result of the determining means; and

selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed by the color image

forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for the color page to be formed on the single sheet is formed by the color image forming means and an image for the black-and-white page to be formed on the single sheet is formed by the black-and-white image forming means,

wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

[Claim 2]

The image formation system according to Claim 1, further comprising:

a merging path where sheets on which images are to be formed by the color image forming means or sheets on which images have been formed by the color image forming means, and sheets on which images are to be formed by the black-and-white image forming means or sheets on which images have been formed by the black-and-white image forming means merge; and

sheet feeding means for feeding a sheet having an image formed thereon beforehand by the color image forming means

or a sheet having an image formed thereon beforehand by the black-and-white image forming means to the merging path,

wherein the selecting means selects one of the first mode and the second mode depending on the type of the sheet feeding means used.

[Claim 3]

The image formation system according to Claim 2, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means and the sheets on which images are to be formed by the black-and-white image forming means merge after completion of image formation, and

the selecting means selects the first mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 4]

The image formation system according to Claim 2, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means or the sheets on which images are to be formed by the black-and-white image forming means merge before completion of image formation, and

the selecting means selects the second mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 5]

The image formation system according to Claim 1, wherein the job in which both a color page and a black-and-white page exist is input from a computer connected to the image formation system.

[Claim 6]

The image formation system according to Claim 1, wherein the job in which both a color page and a black-and-white page exist is input from a scanner connected to the image formation system.

[Claim 7]

The image formation system according to Claim 1, wherein the color image formation apparatus and the black-and-white image formation apparatus receive the same job.

[Claim 8]

The image formation system according to Claim 1, wherein the case where both a color page and a black-and-white page are to be formed a single sheet is one of a case where one side of a sheet having images formed on both sides thereof is a black-and-white page and the other side is a color page; a case where both a color page and black-and-white page are imposed on a single sheet in saddle-stitch book binding; and a case where both a color page and a black-and-white page exist in a single sheet in a reduced layout in which a plurality of reduced pages are arranged on

a sheet.

[Claim 9]

A control method for an image formation system including a color image formation apparatus and a black-and-white image formation apparatus, the control method comprising:

a color image forming step of forming a color image using the color image formation apparatus;

a black-and-white image forming step of forming a black-and-white image using the black-and-white image formation apparatus;

a determining step of determining whether each of pages in an input job in which both a color page and a black-and-white page exist is a color page or a black-and-white page;

a controlling step of performing control so that an image for the color page is formed in the color image forming step and an image for the black-and-white page is formed in the black-and-white image forming step according to the determination result in the determining step; and

a selecting step of selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed in the color image forming step, the second mode being a mode in which, in a

case where both a color page and a black-and-white page are to be formed on a single sheet, an image for the color page to be formed on the single sheet is formed in the color image forming step and an image for the black-and-white page to be formed on the single sheet is formed in the black-and-white image forming step,

wherein the selecting step selects the first mode when sheets having images formed thereon beforehand in the color image forming step or the black-and-white image forming step are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

[Claim 10]

A color image formation apparatus connected via a network to a black-and-white image formation apparatus including black-and-white image forming means, the color image formation apparatus comprising:

color image forming means for forming a color image on a sheet;

receiving means for receiving image information; and

selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed by the color image

forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for only the color page to be formed on the single sheet is formed by the color image forming means,

wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the color image forming means.

[Claim 11]

The color image formation apparatus according to Claim 10, wherein sheets on which images are to be formed or have been formed by the black-and-white image forming means provided in the black-and-white image formation apparatus, and sheets on which images are to be formed or have been formed by the color image forming means merge at a merging path,

a sheet having an image formed thereon beforehand by the color image forming means or a sheet having an image formed thereon beforehand by the black-and-white image forming means is fed to the merging path by sheet feeding means,

the receiving means receives sheet feeding means

information indicating which sheet feeding means is to be used, and

the selecting means selects one of the first mode and the second mode according to the sheet feeding means information received by the receiving means.

[Claim 12]

The color image formation apparatus according to Claim 11, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means and the sheets on which images are to be formed by the black-and-white image forming means merge after completion of image formation, and

the selecting means selects the first mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 13]

The color image formation apparatus according to Claim 12, wherein the sheet feeding means is an inserter or a collator.

[Claim 14]

The color image formation apparatus according to Claim 12, wherein the sheet feeding means is provided in the black-and-white image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the color image forming means,

the color image formation apparatus further comprises determining means for determining whether a received page is a color page or a black-and-white page based on the image information received by the receiving means, and

it is determined whether the received page is black-and-white or color according to the determination result of the determining means.

[Claim 15]

The color image formation apparatus according to Claim 12, wherein the sheet feeding means is provided in the color image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the black-and-white image forming means, and

the receiving means receives information indicating a color page or a black-and-white page, the color image formation apparatus further comprising:

sheet loading means for loading sheets; and

determining means for determining a color page or a black-and-white page based on the information received by the receiving means,

wherein when the determining means determines that only a black-and-white page is to be formed on a single sheet, the sheet having the black-and-white image formed thereon is fed by the sheet feeding means, and

when the determining means does not determine that only

a black-and-white page is to be formed on a single sheet, a sheet is fed from the sheet loading means, and an image is formed on the sheet by the color image forming means.

[Claim 16]

The color image formation apparatus according to Claim 11, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means or the sheets on which images are to be formed by the black-and-white image forming means merge before completion of image formation, and

the selecting means selects the second mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 17]

The color image formation apparatus according to Claim 16, wherein the sheet feeding means is a hand feed unit.

[Claim 18]

The color image formation apparatus according to Claim 16, wherein the sheet feeding means is provided in the black-and-white image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the color image forming means,

the color image formation apparatus further comprises determining means for determining whether a received page is a color page or a black-and-white page based on the image

information received by the receiving means, and

it is determined whether the received page is black-and-white or color according to the determination result of the determining means.

[Claim 19]

The color image formation apparatus according to Claim 16, wherein the sheet feeding means is provided in the color image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the black-and-white image forming means, and

the receiving means receives information indicating a color page or a black-and-white page, the color image formation apparatus further comprising:

sheet loading means for loading sheets; and

determining means for determining a color page or a black-and-white page based on the information received by the receiving means,

wherein when the determining means determines that only a color page is to be formed on a single sheet, a sheet is fed from the sheet loading means, and an image is formed on the sheet by the color image forming means,

when the determining means determines that only a black-and-white page is to be formed on a single sheet, the sheet having the black-and-white image formed thereon is fed from the sheet feeding means, and

when the determining means determines that both a color page and a black-and-white page exist on a single sheet, the sheet is fed by the sheet feeding means, after which an image for the color page is formed by the color image forming means.

[Claim 20]

A black-and-white image formation apparatus connected via a network to a color image formation apparatus including color image forming means, the black-and-white image formation apparatus comprising:

black-and-white image forming means for forming a black-and-white image on a sheet;

receiving means for receiving image information; and

selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, no image is formed by the black-and-white image forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for only the black-and-white page to be formed on the single sheet is formed by the black-and-white image forming means,

wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming

means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

[Claim 21]

The black-and-white image formation apparatus according to Claim 20, wherein sheets on which images are to be formed or have been formed by the black-and-white image forming means, and sheets on which images are to be formed or have been formed by the color image forming means provided in the color image formation apparatus merge at a merging path;

a sheet having an image formed thereon beforehand by the color image forming means or a sheet having an image formed thereon beforehand by the black-and-white image forming means is fed to the merging path by sheet feeding means,

the receiving means receives sheet feeding means information indicating which sheet feeding means is to be used, and

the selecting means selects one of the first mode and the second mode according to the sheet feeding means information received by the receiving means.

[Claim 22]

The black-and-white image formation apparatus according to Claim 21, wherein the merging path is located at a position where the sheets on which images are to be formed

by the color image forming means and the sheets on which images are to be formed by the black-and-white image forming means merge after completion of image formation, and

the selecting means selects the first mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 23]

The black-and-white image formation apparatus according to Claim 22, wherein the sheet feeding means is an inserter or a collator.

[Claim 24]

The black-and-white image formation apparatus according to Claim 22, wherein the sheet feeding means is provided in the color image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the black-and-white image forming means,

the black-and-white image formation apparatus further comprises determining means for determining whether a received page is a color page or a black-and-white page based on the image information received by the receiving means, and

it is determined whether the received page is black-and-white or color according to the determination result of the determining means.

[Claim 25]

The black-and-white image formation apparatus according to Claim 22, wherein the sheet feeding means is provided in the black-and-white image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the color image forming means,

the receiving means receives information indicating a color page or a black-and-white page, the black-and-white image formation apparatus further comprising:

sheet loading means for loading sheets; and

determining means for determining a color page or a black-and-white page based on the information received by the receiving means,

wherein when the determining means determines that only a black-and-white page is to be formed on a single sheet, a sheet is fed from the sheet loading means, and an image is formed on the sheet by the black-and-white image forming means, and

when the determining means does not determine that only a black-and-white page is to be formed on a single sheet, the sheet having the color image formed thereon is fed by the sheet feeding means.

[Claim 26]

The black-and-white image formation apparatus according to Claim 21, wherein the merging path is located at a position where the sheets on which images are to be formed

by the color image forming means or the sheets on which images are to be formed by the black-and-white image forming means merge before completion of image formation, and

the selecting means selects the second mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 27]

The black-and-white image formation apparatus according to Claim 26, wherein the sheet feeding means is a hand feed unit.

[Claim 28]

The black-and-white image formation apparatus according to Claim 26, wherein the sheet feeding means is provided in the color image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the black-and-white image forming means,

the black-and-white image formation apparatus further comprises determining means for determining whether a received page is a color page or a black-and-white page based on the image information received by the receiving means, and

it is determined whether the received page is black-and-white or color according to the determination result of the determining means.

[Claim 29]

The black-and-white image formation apparatus according to Claim 26, wherein the sheet feeding means is provided in the black-and-white image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the color image forming means, and

the receiving means receives information indicating a color page or a black-and-white page, the black-and-white image formation apparatus further comprising:

sheet loading means for loading sheets; and

determining means for determining a color page or a black-and-white page based on the information received by the receiving means,

wherein when the determining means determines that only a black-and-white page is to be formed on a single sheet, a sheet is fed from the sheet loading means, and an image is formed on the sheet by the black-and-white image forming means,

when the determining means determines that only a color page is to be formed on a single sheet, the sheet having the color image formed thereon is fed from the sheet feeding means, and

when the determining means determines that both a color page and a black-and-white page exist on a single sheet, the sheet is fed by the sheet feeding means, after which an image for the black-and-white page is formed by the black-

and-white image forming means.

④ 諸国の名称 国標形成システム、西標形成システムの制御方法、カラー国標形成装置、及びプログラム

[illegible][illegible]

一ページのみが画像形成されると判断した場合、前記給送手段から前記カラー画像が形成されているシートを送り、1枚のシートにカラーページと白黒ページの両方が存在すると判断した場合、前記給送手段によってシートを給送した後、白黒ページを前記白黒画像形成手段によって画像形成することを特徴とする請求項26記載の白黒画像形成装置。

いて、カラーページか白黒ページかを判定する判定手段とを有する白黒画像形成装置において、前記判定手段によって1枚のシートに白黒ページの両方が画像形成されると判断した場合、前記機構手段からシートを給送して前記白黒画像形成手段によってシートに画像を形成し、前記判定手段によって1枚のシートに白黒ページの両方が画像形成されると判断しなかつた場合、前記給送手段によって前記カラー画像が形成されているシートを送り、1枚のシートを給送することとを特徴とする請求項22記載の白黒画像形成装置。

【請求項26】
前記カラー画像形成手段によって画像形成されるべきシート及び前記白黒画像形成手段によって画像形成されるべきシートのいずれかが、画像形成完了前に合流する位置に前記合流パスが存在し、シートを給送する前記給送手段を用いる場合は、前記送戻手段は前記第2のモードを選択することを特徴とする請求項21記載の白黒画像形成装置。

【請求項27】
前記給送手段は、手差し給紙部であることとを特徴とする請求項26記載の白黒画像形成装置。

【請求項28】
前記給送手段は前記カラー画像形成装置に設けられ、前記白黒画像形成手段によって予め画像形成されたシートを送り、1枚のシートを給送することとを特徴とする請求項27記載の白黒画像形成装置において、前記判定手段によって受信した前記画像情報に基づいて、受信したカラーページであるかを判定する判定手段とを有し、前記判定手段の判定結果によって受信したページが白黒であるかカラーであるかを判定することとを特徴とする請求項26記載の白黒画像形成装置。

【請求項29】
前記給送手段は前記白黒画像形成装置に設けられ、前記カラー画像形成手段によって予め画像形成されたシートを送り、1枚のシートを給送することとを特徴とする請求項28記載の白黒画像形成装置において、前記判定手段はカラーページであるか白黒ページであるかの情報を受信するものであることとを特徴とする請求項28記載の白黒画像形成装置。

シートを搬送する機構手段と、前記受信手段によって受信した情報に基づいて、カラーページか白黒ページかを判定する判定手段とを有する白黒画像形成装置であって、前記判定手段によって1枚のシートに白黒ページの両方が画像形成されると判断した場合、前記機構手段からシートを給送して前記白黒画像形成手段によってシートに画像を形成し、前記判定手段によって1枚のシートにカラー

Reference No. 4650104

Dispatch No. 294430

Dispatch Date: August 9, 2005

Notification of Reasons for Refusal

Patent Application No.	2002-193598
Drafting Date	August 5, 2005
JPO Examiner	Tsuyoshi NAKADA 2951 5E00
Agent / Applicant	Keizo NISHIYAMA (one other)
Applied Provision	Patent Law Section 29(2)

This application is refused for the reasons mentioned below. If the applicant has any argument against the reasons, such argument should be submitted within 60 days from the date on which this notification was dispatched.

Reasons

The inventions in the claims noted below of the subject application are unpatentable under Patent Law Section 29(2) since they could have been easily made by persons who have common knowledge in the technical field to which the inventions pertain, on the basis of the inventions described in the publications below which were distributed prior to the filing of the subject application or the inventions made available to the public through telecommunication lines prior to the filing of the subject application in Japan or other countries.

Note

1. Japanese Patent Laid-Open No. 2000-222148
2. Japanese Patent Laid-Open No. 2002-86852
3. Japanese Patent Laid-Open No. 2000-112688
4. Japanese Patent Laid-Open No. 2002-157102

Claims 1, 8, 10, 20, and 31 to 33
Cited Documents etc. 1 and 2

Remark:

Cited Document 1 discloses a system in which in a case where a color page and a black-and-white page are to be formed on a single sheet, an image for the color page is formed by a color printer and an image for the remaining page is formed by a black-and-white printer.

Cited Document 2 (see, in particular, [0020]) discloses a technique in which in a case where a color page and a black-and-white page are to be formed on a single sheet, images for all the pages are formed by a color printer.

It is common to selectably implement a plurality of processing modes. Therefore, by applying the technique disclosed in Cited Document 2 to the invention set forth in Cited Document 1, in a case where a color page and a black-and-white page are to be formed on a single sheet, a person skilled in the art could have easily achieved selectable implementation to form an image for the color page using a color printer and an image for the remaining page using a black-and-white printer, or to form images for all the pages using the color printer.

Claims 2 to 4, 7, 11 to 19, and 21 to 29

Cited Documents etc. 1 to 4

Remark:

In an invention in which the technique disclosed in Cited Document 2 is applied to Cited Document 1, it is a matter of design achievable by a person skilled in the art, as required, what is selected as a path on which sheets are conveyed and a mixing method. Further, it is a common technique to associate related functions in advance.

Moreover, a technique for transmitting the same job to a color printer and a black-and-white printer is well known (see, for example, Cited Document 3 (in particular, [0052]) and Cited Document 4 (in particular, [0182])).

Claims 5 and 6

Cited Documents etc. 1 to 4

Remark:

Cited Document 1 discloses that a job is input from a computer (in particular, [0036]) and that a job is input from a scanner (in particular, [0079]).

Claims 9 and 30

Cited Documents etc. 1 and 2

Remark:

Claims 9 and 30 defines a method and a program for implementing the image formation system set forth in Claim 1, respectively. As in Claim 1, a person skilled in the art would not require a special effort to arrive at Claims 9 and 30.

If any reason for refusal is found later, it will be notified.

Record of the results of prior art search

•Technical fields searched: IPC 7th Edition
 G06F3/12
 B41J3/00

•Prior art document:
 Japanese Patent Laid-Open No. 2002-113924

This record is not part of the reasons for refusal.

整理番号:4650104 発送番号:294430 発送日:平成17年 8月 9日 1

拒絶理由通知書

特許出願の番号	特願2002-193598
起案日	平成17年 8月 5日
特許庁審査官	中田 剛史 2951 5E00
特許出願人代理人	西山 恵三(外 1名) 様
適用条文	第29条第2項

この出願は、次の理由によって拒絶をすべきものである。これについて意見があれば、この通知書の発送の日から60日以内に意見書を提出して下さい。

理 由

この出願の下記の請求項に係る発明は、その出願前日本国内又は外国において頒布された下記の刊行物に記載された発明又は電気通信回線を通じて公衆に利用可能となった発明に基いて、その出願前にその発明の属する技術の分野における通常の知識を有する者が容易に発明をすることができたものであるから、特許法第29条第2項の規定により特許を受けることができない。

記

1. 特開2000-222148号公報
2. 特開2002-86852号公報
3. 特開2000-112688号公報
4. 特開2002-157102号公報

請求項 1, 8, 10, 20, 31-33

引用文献等 1, 2

備考:

引用文献1には、1枚のシートにカラーページと白黒ページが形成される場合、カラーページはカラープリンタで画像形成し、残りを白黒プリンタで画像形成するシステム、が記載されている。

ところで引用文献2（特に【0020】を参照）には、1枚のシートにカラーページと白黒ページが形成される場合、カラープリンタで全てのページを画像形成する技術が記載されている。

複数の処理モードを選択可能に実装することは、一般に広く行われていることであるから、引用文献2に記載された技術を引用文献1に記載された発明に適用して、1枚のシートにカラーページと白黒ページが形成される場合、カラーペー

整理番号:4650104 発送番号:294430 発送日:平成17年 8月 9日 2/E

ジはカラープリンタで画像形成し、残りを白黒プリンタで画像形成することと、カラープリンタで全てのページを画像形成することを選択可能に実装することは、当業者であれば容易に想到し得たことである。

請求項 2-4, 7, 11-19, 21-29

引用文献等 1-4

備考:

引用文献1に引用文献2に記載された技術を適用した発明において、シートが搬送されるパス及び混交手法として何を選択するかは、当業者が適宜なし得る設計的事項であり、また関連する機能を予め対応付けしておくことは、一般に広く行われている技術である。

さらに、カラープリンタと白黒プリンタに同じジョブを送信する技術は周知である（例えば、引用文献3（特に【0052】）、引用文献4（特に【0182】）を参照）。

請求項 5, 6

引用文献等 1-4

備考:

引用文献1には、コンピュータからジョブを入力すること（特に【0036】）、及びスキャナからジョブを入力すること（特に【0079】）が記載されている。

請求項 9, 30

引用文献等 1, 2

備考:

請求項9, 30は請求項1に記載された画像形成システムを実現するための方法及びプログラムであるから、請求項9, 30は請求項1と同様、当業者であれば格別の創意を要しないことである。

拒絶の理由が新たに発見された場合には拒絶の理由が通知される。

先行技術文献調査結果の記録

- ・調査した分野 IPC第7版 G06F3/12, B41J3/00
- ・先行技術文献 特開2002-113924号公報

この先行技術文献調査結果の記録は、拒絶理由を構成するものではない。

[Name of Document] Amendment
[Date of Submission] October 11, 2005
[Addressee] Commissioner of the Patent Office
[Description of the Case]
[Application No.] Patent Application No. 2002-193598
[Person Submitting the Amendment]
[Id. No.] 000001007
[Address] 30-2, Shimomaruko 3-chome, Ohta-ku,
Tokyo
[Name] CANON KABUSHIKI KAISHA
[Representative] Fujio MITARAI
[Phone No.] 03-3758-2111
[Agent]
[Id. No.] 100090538
[Address] c/o CANON KABUSHIKI KAISHA, 30-2,
Shimomaruko 3-chome, Ohta-ku, Tokyo
[Patent Attorney]
[Name] Keizo NISHIYAMA
[Phone No.] 03-3758-2111
[Amendment 1]
[Name of Document to be Amended] Specification
[Name of Item to be Amended] Claims
[Manner of Amendment] Change
[Content of Amendment]
[Claims]

[Claim 1] An image formation system including a color image formation apparatus and a black-and-white image formation apparatus, the image formation system comprising:

color image forming means for forming a color image using the color image formation apparatus;

black-and-white image forming means for forming a black-and-white image using the black-and-white image formation apparatus;

determining means for determining whether each of pages in an input job in which both a color page and a black-and-white page exist is a color page or a black-and-white page;

controlling means for controlling the color image forming means to form an image for the color page and controlling the black-and-white image forming means to form an image for the black-and-white page according to the determination result of the determining means; and

selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed by the color image forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for the color page to be formed on the single sheet is formed by the color

image forming means and an image for the black-and-white page to be formed on the single sheet is formed by the black-and-white image forming means,

wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

[Claim 2] The image formation system according to Claim 1, further comprising:

a merging path where sheets on which images are to be formed by the color image forming means or sheets on which images have been formed by the color image forming means, and sheets on which images are to be formed by the black-and-white image forming means or sheets on which images have been formed by the black-and-white image forming means merge; and

sheet feeding means for feeding a sheet having an image formed thereon beforehand by the color image forming means or a sheet having an image formed thereon beforehand by the black-and-white image forming means to the merging path,

wherein the selecting means selects one of the first mode and the second mode depending on the type of the sheet feeding means used.

[Claim 3] The image formation system according to Claim 2, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means and the sheets on which images are to be formed by the black-and-white image forming means merge after completion of image formation, and

the selecting means selects the first mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 4] The image formation system according to Claim 2, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means or the sheets on which images are to be formed by the black-and-white image forming means merge before completion of image formation, and

the selecting means selects the second mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 5] The image formation system according to Claim 1, wherein the job in which both a color page and a black-and-white page exist is input from a computer connected to the image formation system.

[Claim 6] The image formation system according to Claim 1, wherein the job in which both a color page and a black-and-white page exist is input from a scanner connected to the

image formation system.

[Claim 7] The image formation system according to Claim 1, wherein the color image formation apparatus and the black-and-white image formation apparatus receive the same job.

[Claim 8] The image formation system according to Claim 1, wherein the case where both a color page and a black-and-white page are to be formed a single sheet is one of a case where one side of a sheet having images formed on both sides thereof is a black-and-white page and the other side is a color page; a case where both a color page and black-and-white page are imposed on a single sheet in saddle-stitch book binding; and a case where both a color page and a black-and-white page exist in a single sheet in a reduced layout in which a plurality of reduced pages are arranged on a sheet.

[Claim 9] A control method for an image formation system including a color image formation apparatus and a black-and-white image formation apparatus, the control method comprising:

- a color image forming step of forming a color image using the color image formation apparatus;

- a black-and-white image forming step of forming a black-and-white image using the black-and-white image formation apparatus;

- a determining step of determining whether each of pages

in an input job in which both a color page and a black-and-white page exist is a color page or a black-and-white page;

a controlling step of performing control so that an image for the color page is formed in the color image forming step and an image for the black-and-white page is formed in the black-and-white image forming step according to the determination result in the determining step; and

a selecting step of selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed in the color image forming step, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for the color page to be formed on the single sheet is formed in the color image forming step and an image for the black-and-white page to be formed on the single sheet is formed in the black-and-white image forming step,

wherein the selecting step selects the first mode when sheets having images formed thereon beforehand in the color image forming step or the black-and-white image forming step are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

[Claim 10] A color image formation apparatus connected via a network to a black-and-white image formation apparatus including black-and-white image forming means, the color image formation apparatus comprising:

color image forming means for forming a color image on a sheet;

receiving means for receiving image information; and

selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed by the color image forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for only the color page to be formed on the single sheet is formed by the color image forming means,

wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the color image forming means.

[Claim 11] The color image formation apparatus according to Claim 10, wherein sheets on which images are to be formed

or have been formed by the black-and-white image forming means provided in the black-and-white image formation apparatus, and sheets on which images are to be formed or have been formed by the color image forming means merge at a merging path,

a sheet having an image formed thereon beforehand by the color image forming means or a sheet having an image formed thereon beforehand by the black-and-white image forming means is fed to the merging path by sheet feeding means,

the receiving means receives sheet feeding means information indicating which sheet feeding means is to be used, and

the selecting means selects one of the first mode and the second mode according to the sheet feeding means information received by the receiving means.

[Claim 12] The color image formation apparatus according to Claim 11, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means and the sheets on which images are to be formed by the black-and-white image forming means merge after completion of image formation, and

the selecting means selects the first mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 13] The color image formation apparatus according to Claim 12, wherein the sheet feeding means is an inserter or a collator.

[Claim 14] The color image formation apparatus according to Claim 12, wherein the sheet feeding means is provided in the black-and-white image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the color image forming means,

the color image formation apparatus further comprises determining means for determining whether a received page is a color page or a black-and-white page based on the image information received by the receiving means, and

it is determined whether the received page is black-and-white or color according to the determination result of the determining means.

[Claim 15] The color image formation apparatus according to Claim 12, wherein the sheet feeding means is provided in the color image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the black-and-white image forming means, and

the receiving means receives information indicating a color page or a black-and-white page, the color image formation apparatus further comprising:

sheet loading means for loading sheets; and

determining means for determining a color page or a

black-and-white page based on the information received by the receiving means,

wherein when the determining means determines that only a black-and-white page is to be formed on a single sheet, the sheet having the black-and-white image formed thereon is fed by the sheet feeding means, and

when the determining means does not determine that only a black-and-white page is to be formed on a single sheet, a sheet is fed from the sheet loading means, and an image is formed on the sheet by the color image forming means.

[Claim 16] The color image formation apparatus according to Claim 11, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means or the sheets on which images are to be formed by the black-and-white image forming means merge before completion of image formation, and

the selecting means selects the second mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 17] The color image formation apparatus according to Claim 16, wherein the sheet feeding means is a hand feed unit.

[Claim 18] The color image formation apparatus according to Claim 16, wherein the sheet feeding means is provided in the black-and-white image formation apparatus, and is

configured to feed the sheet having an image formed thereon beforehand by the color image forming means,

the color image formation apparatus further comprises determining means for determining whether a received page is a color page or a black-and-white page based on the image information received by the receiving means, and

it is determined whether the received page is black-and-white or color according to the determination result of the determining means.

[Claim 19] The color image formation apparatus according to Claim 16, wherein the sheet feeding means is provided in the color image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the black-and-white image forming means, and

the receiving means receives information indicating a color page or a black-and-white page, the color image formation apparatus further comprising:

sheet loading means for loading sheets; and

determining means for determining a color page or a black-and-white page based on the information received by the receiving means,

wherein when the determining means determines that only a color page is to be formed on a single sheet, a sheet is fed from the sheet loading means, and an image is formed on the sheet by the color image forming means,

when the determining means determines that only a black-and-white page is to be formed on a single sheet, the sheet having the black-and-white image formed thereon is fed from the sheet feeding means, and

when the determining means determines that both a color page and a black-and-white page exist on a single sheet, the sheet is fed by the sheet feeding means, after which an image for the color page is formed by the color image forming means.

[Claim 20] A black-and-white image formation apparatus connected via a network to a color image formation apparatus including color image forming means, the black-and-white image formation apparatus comprising:

black-and-white image forming means for forming a black-and-white image on a sheet;

receiving means for receiving image information; and

selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, no image is formed by the black-and-white image forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for only the black-and-white page to be formed on the single sheet is formed by the black-and-white image forming means,

wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

[Claim 21] The black-and-white image formation apparatus according to Claim 20, wherein sheets on which images are to be formed or have been formed by the black-and-white image forming means, and sheets on which images are to be formed or have been formed by the color image forming means provided in the color image formation apparatus merge at a merging path;

a sheet having an image formed thereon beforehand by the color image forming means or a sheet having an image formed thereon beforehand by the black-and-white image forming means is fed to the merging path by sheet feeding means,

the receiving means receives sheet feeding means information indicating which sheet feeding means is to be used, and

the selecting means selects one of the first mode and the second mode according to the sheet feeding means information received by the receiving means.

[Claim 22] The black-and-white image formation apparatus

according to Claim 21, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means and the sheets on which images are to be formed by the black-and-white image forming means merge after completion of image formation, and the selecting means selects the first mode when the sheet feeding means that feeds a sheet to the merging path is used.

[Claim 23] The black-and-white image formation apparatus according to Claim 22, wherein the sheet feeding means is an inserter or a collator.

[Claim 24] The black-and-white image formation apparatus according to Claim 22, wherein the sheet feeding means is provided in the color image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the black-and-white image forming means,

the black-and-white image formation apparatus further comprises determining means for determining whether a received page is a color page or a black-and-white page based on the image information received by the receiving means, and

it is determined whether the received page is black-and-white or color according to the determination result of the determining means.

[Claim 25] The black-and-white image formation apparatus

according to Claim 22, wherein the sheet feeding means is provided in the black-and-white image formation apparatus, and is configured to feed the sheet having an image formed thereon beforehand by the color image forming means,

the receiving means receives information indicating a color page or a black-and-white page, the black-and-white image formation apparatus further comprising:

sheet loading means for loading sheets; and

determining means for determining a color page or a black-and-white page based on the information received by the receiving means,

wherein when the determining means determines that only a black-and-white page is to be formed on a single sheet, a sheet is fed from the sheet loading means, and an image is formed on the sheet by the black-and-white image forming means, and

when the determining means does not determine that only a black-and-white page is to be formed on a single sheet, the sheet having the color image formed thereon is fed by the sheet feeding means.

[Claim 26] The black-and-white image formation apparatus according to Claim 21, wherein the merging path is located at a position where the sheets on which images are to be formed by the color image forming means or the sheets on which images are to be formed by the black-and-white image

forming means merge before completion of image formation,
and

the selecting means selects the second mode when the
sheet feeding means that feeds a sheet to the merging path
is used.

[Claim 27] The black-and-white image formation apparatus
according to Claim 26, wherein the sheet feeding means is a
hand feed unit.

[Claim 28] The black-and-white image formation apparatus
according to Claim 26, wherein the sheet feeding means is
provided in the color image formation apparatus, and is
configured to feed the sheet having an image formed thereon
beforehand by the black-and-white image forming means,

the black-and-white image formation apparatus further
comprises determining means for determining whether a
received page is a color page or a black-and-white page
based on the image information received by the receiving
means, and

it is determined whether the received page is black-
and-white or color according to the determination result of
the determining means.

[Claim 29] The black-and-white image formation apparatus
according to Claim 26, wherein the sheet feeding means is
provided in the black-and-white image formation apparatus,
and is configured to feed the sheet having an image formed

thereon beforehand by the color image forming means, and
the receiving means receives information indicating a
color page or a black-and-white page, the black-and-white
image formation apparatus further comprising:

sheet loading means for loading sheets; and

determining means for determining a color page or a
black-and-white page based on the information received by
the receiving means,

wherein when the determining means determines that only
a black-and-white page is to be formed on a single sheet, a
sheet is fed from the sheet loading means, and an image is
formed on the sheet by the black-and-white image forming
means,

when the determining means determines that only a color
page is to be formed on a single sheet, the sheet having the
color image formed thereon is fed from the sheet feeding
means, and

when the determining means determines that both a color
page and a black-and-white page exist on a single sheet, the
sheet is fed by the sheet feeding means, after which an
image for the black-and-white page is formed by the black-
and-white image forming means.

[Amendment 2]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0004

[Manner of Amendment] Change

[0004]

[Means for Solving the Problems]

In view of the above-mentioned problems, the present invention provides an image formation system including color image forming means for forming a color image using the color image formation apparatus; black-and-white image forming means for forming a black-and-white image using the black-and-white image formation apparatus; determining means for determining whether each of pages in an input job in which both a color page and a black-and-white page exist is a color page or a black-and-white page; controlling means for controlling the color image forming means to form an image for the color page and controlling the black-and-white image forming means to form an image for the black-and-white page according to the determination result of the determining means; and selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed by the color image forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for

the color page to be formed on the single sheet is formed by the color image forming means and an image for the black-and-white page to be formed on the single sheet is formed by the black-and-white image forming means, wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

[Amendment 3]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0005

[Manner of Amendment] Change

[Content of Amendment]

[0005]

The present invention further provides a control method for an image formation system including a color image formation apparatus and a black-and-white image formation apparatus, the control method including a color image forming step of forming a color image using the color image formation apparatus; a black-and-white image forming step of forming a black-and-white image using the black-and-white image formation apparatus; a determining step of determining

whether each of pages in an input job in which both a color page and a black-and-white page exist is a color page or a black-and-white page; a controlling step of performing control so that an image for the color page is formed in the color image forming step and an image for the black-and-white page is formed in the black-and-white image forming step according to the determination result in the determining step; and a selecting step of selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed in the color image forming step, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for the color page to be formed on the single sheet is formed in the color image forming step and an image for the black-and-white page to be formed on the single sheet is formed in the black-and-white image forming step, wherein the selecting step selects the first mode when sheets having images formed thereon beforehand in the color image forming step or the black-and-white image forming step are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

[Amendment 4]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0006

[Manner of Amendment] Change

[0006]

The present invention further provides a color image formation apparatus connected via a network to a black-and-white image formation apparatus including black-and-white image forming means, the color image formation apparatus including color image forming means for forming a color image on a sheet; receiving means for receiving image information; and selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed by the color image forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for only the color page to be formed on the single sheet is formed by the color image forming means, wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed

without passing through an image forming position, and
selects the second mode when the sheets are mixed after
passing through the color image forming means.

[Amendment 5]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0007

[Manner of Amendment] Change

[0007]

The present invention further provides a black-and-white image formation apparatus connected via a network to a color image formation apparatus including color image forming means, the black-and-white image formation apparatus including black-and-white image forming means for forming a black-and-white image on a sheet; receiving means for receiving image information; and selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, no image is formed by the black-and-white image forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for only the black-and-white page to be formed on the single sheet is formed by the black-and-white image forming means, wherein the

selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

[Amendment 6]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0008

[Manner of Amendment] Deletion

[Amendment 7]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0009

[Manner of Amendment] Deletion

[Amendment 8]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0010

[Manner of Amendment] Deletion

[Amendment 9]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0011

[Manner of Amendment] Deletion

[Amendment 10]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0127

[Manner of Amendment] Change

[0127]

[Advantages]

As described above, according to the invention set forth in Claim 1, selecting means for selecting one of a first mode and a second mode is provided, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed by the color image forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for the color page to be formed on the single sheet is formed by the color image forming means and an image for the black-and-white page to be formed on the single sheet is formed by the black-and-white image forming means, wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and

selects the second mode when the sheets are mixed after passing through the image forming position. Therefore, in a case where both a color page and a black-and-white page are to be formed on a single sheet, it is possible to automatically select both the color image formation apparatus and the black-and-white image formation apparatus or the color image formation apparatus to form images on that sheet, and the present invention can handle any method for collating color pages and black-and-white pages.

[Amendment 11]

[Name of Document to be Amended] Specification

[Name of Item to be Amended] 0131

[Manner of Amendment] Change

[0131]

The invention set forth in Claims 9, 10, and 20 can also achieve similar advantages to those of Claim 1.

整理番号: 特願2002-193598 提出日:平成17年10月11日 1

【書類名】 手続補正書
 【提出日】 平成17年10月11日
 【あて先】 特許庁長官 殿
 【事件の表示】
 【出願番号】 特願2002-193598
 【補正をする者】
 【識別番号】 000001007
 【住所又は居所】 東京都大田区下丸子3丁目30番2号
 【氏名又は名称】 キヤノン株式会社
 【代表者】 御手洗 富士夫
 【電話番号】 03-3758-2111
 【代理人】
 【識別番号】 100090538
 【住所又は居所】 東京都大田区下丸子3丁目30番2号キヤノン株式会社内
 【弁理士】
 【氏名又は名称】 西山 恵三
 【電話番号】 03-3758-2111
 【手続補正1】
 【補正対象書類名】 明細書
 【補正対象項目名】 特許請求の範囲
 【補正方法】 変更
 【補正の内容】
 【特許請求の範囲】
 【請求項1】 カラー画像形成装置と白黒画像形成装置とから成る画像形成システムにおいて、
 前記カラー画像形成装置でカラーの画像を形成するカラー画像形成手段と、
 前記白黒画像形成装置で白黒の画像を形成する白黒画像形成手段と、
 入力されたカラーページと白黒ページが混在するジョブの各ページに関し、カラーページか白黒ページかを判定する判定手段と、
 前記判定手段の判定結果に応じて、前記カラーページは前記カラー画像形成手段により画像形成させ、前記白黒ページは前記白黒画像形成手段により画像形成させる制御手段と
 、
 1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきすべてのページを前記カラー画像形成手段で画像形成する第1のモード、及び1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきカラーページは前記カラー画像形成手段で画像形成し、そのシート上に画像形成されるべき白黒ページは前記白黒画像形成手段で画像形成する第2のモードのいずれかを選択する選択手段とを有し、
 前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、画像形成位置を通過させて混交する場合は前記第2のモードを選択することを特徴とする画像形成システム。
 【請求項2】 前記カラー画像形成手段によって画像形成されるべきシートあるいは画像形成されたシートと、前記白黒画像形成手段によって画像形成されるべきシートあるいは画像形成されたシートとが合流する合流パスと、
 前記カラー画像形成手段によって予め画像形成されたシート、または前記白黒画像形成手段によって予め画像形成されたシートとを前記合流パスまで給送する給送手段とを有し
 、
 前記選択手段は、使用する前記給送手段の種類に応じて前記第1のモード及び前記第2のモードのいずれかを選択することを特徴とする請求項1記載の画像形成システム。

整理番号: 特願2002-193598 提出日:平成17年10月11日 2

【請求項3】 前記カラー画像形成手段によって画像形成されるべきシート、及び前記白黒画像形成手段によって画像形成されるべきシートが、共に画像形成完了後に合流する位置に前記合流パスが存在し、

前記合流パスまでシートを給送する前記給送手段を使用する場合は、前記選択手段は前記第1のモードを選択することを特徴とする請求項2記載の画像形成システム。

【請求項4】 前記カラー画像形成手段によって画像形成されるべきシート、及び前記白黒画像形成手段によって画像形成されるべきシートのいずれかが、画像形成完了前に合流する位置に前記合流パスが存在し、

前記合流パスまでシートを給送する前記給送手段を用いる場合は、前記選択手段は前記第2のモードを選択することを特徴とする請求項2記載の画像形成システム。

【請求項5】 前記カラーページと白黒ページが混在するジョブは、前記画像形成システムに接続されたコンピュータから入力することを特徴とする請求項1記載の画像形成システム。

【請求項6】 前記カラーページと白黒ページが混在するジョブは、前記画像形成システムに接続されたスキャナから入力することを特徴とする請求項1記載の画像形成システム。

【請求項7】 前記カラー画像形成装置及び前記白黒画像形成装置は、1つのジョブに対して同じジョブを受信することを特徴とする請求項1記載の画像形成システム。

【請求項8】 前記1枚のシートにカラーページと白黒ページが画像形成される場合とは、両面画像の一方の面が白黒ページで他方の面がカラーページである場合、および中継製本を行うときの面付けにおいて1枚のシートにカラーページと白黒ページの両方が存在する場合、および1枚のシートに複数のページを縮小して画像形成する縮小レイアウトにおいて1枚のシートにカラーページと白黒ページの両方が存在する場合のいずれかであることを特徴とする請求項1記載の画像形成システム。

【請求項9】 カラー画像形成装置と白黒画像形成装置とから成る画像形成システムの制御方法において、

前記カラー画像形成装置でカラーの画像を形成するカラー画像形成ステップと、

前記白黒画像形成装置で白黒の画像を形成する白黒画像形成ステップと、

入力されたカラーページと白黒ページが混在するジョブの各ページに関し、カラーページか白黒ページかを判定する判定ステップと、

前記判定ステップの判定結果に応じて、前記カラーページは前記カラー画像形成ステップにより画像形成させ、前記白黒ページは前記白黒画像形成ステップにより画像形成させる制御ステップと、

1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきすべてのページを前記カラー画像形成ステップで画像形成する第1のモードと、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきカラーページは前記カラー画像形成ステップで画像形成し、そのシート上に画像形成されるべき白黒ページは前記白黒画像形成ステップで画像形成する第2のモードのいずれかを選択する選択ステップとを有し、

前記選択ステップは、前記カラー画像形成ステップ又は前記白黒画像形成ステップにより予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、画像形成位置を通過させて混交する場合は前記第2のモードを選択することを特徴とする画像形成システムの制御方法。

【請求項10】 白黒画像形成手段を有する白黒画像形成装置とネットワークを介して接続されるカラー画像形成装置において、

シートにカラー画像を形成するカラー画像形成手段と、

画像情報を受信する受信手段と、

1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきすべてのページを前記カラー画像形成手段によって画像形成する第1のモードと、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上

整理番号: 特願2002-193598 提出日:平成17年10月11日 3

に画像形成されるべきカラーページのみを前記カラー画像形成手段によって画像形成する第2のモードのいずれかを選択する選択手段とを有し、

前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、前記カラー画像形成手段を通過させて混交する場合は前記第2のモードを選択することを特徴とするカラー画像形成装置。

【請求項11】 白黒画像形成装置に設けられている白黒画像形成手段により画像形成されるべきあるいは画像形成されたシート、及び前記カラー画像形成手段により画像形成されるべきあるいは画像形成されたシートとは合流パスで合流し、

前記カラー画像形成手段によって予め画像形成されたシート、または前記白黒画像形成手段によって予め画像形成されたシートは、給送手段によって前記合流パスまで給送されるものであって、

前記受信手段はどの前記給送手段を用いるのかを表す給送手段情報を受信し、

前記選択手段は、前記受信手段が受信した前記給送手段情報に応じて前記第1のモード及び前記第2のモードのいずれかを選択することを特徴とする請求項10記載のカラー画像形成装置。

【請求項12】 前記カラー画像形成手段によって画像形成されるべきシート、及び前記白黒画像形成手段によって画像形成されるべきシートが、共に画像形成完了後に合流する位置に前記合流パスが存在し、

前記合流パスまでシートを給送する前記給送手段を使用する場合は、前記選択手段は前記第1のモードを選択することを特徴とする請求項11記載のカラー画像形成装置。

【請求項13】 前記給送手段は、インサータ及びコレータのいずれかであることを特徴とする請求項12記載のカラー画像形成装置。

【請求項14】 前記給送手段は前記白黒画像形成装置に設けられ、前記カラー画像形成手段によって予め画像形成されたシートを給送するものであって、

前記受信手段によって受信した前記画像情報に基づいて、受信したページがカラーページであるか白黒ページであるかを判定する判定手段を有し、

前記判定手段の判定結果によって受信したページが白黒であるかカラーであるかを判定することを特徴とする請求項12記載のカラー画像形成装置。

【請求項15】 前記給送手段は前記カラー画像形成装置に設けられ、前記白黒画像形成手段によって予め画像形成されたシートを給送するものであり、

前記受信手段はカラーページであるか白黒ページであるかの情報を受信するものであって、

シートを積載する積載手段と、

前記受信手段によって受信した情報に基づいて、カラーページか白黒ページかを判定する判定手段とを有するカラー画像形成装置において、

前記判定手段によって1枚のシートに白黒ページのみが画像形成されるシートであると判断した場合、前記給送手段によって前記白黒画像が形成されているシートを給送し、

前記判定手段によって1枚のシートに白黒ページのみが画像形成されるシートであると判断しなかった場合、前記積載手段からシートを給送して前記カラー画像形成手段によってシートに画像を形成することを特徴とする請求項12記載のカラー画像形成装置。

【請求項16】 前記カラー画像形成手段によって画像形成されるべきシート、及び前記白黒画像形成手段によって画像形成されるべきシートのいずれかが、画像形成完了前に合流する位置に前記合流パスが存在し、

前記合流パスまでシートを給送する前記給送手段を用いる場合は、前記選択手段は前記第2のモードを選択することを特徴とする請求項11記載のカラー画像形成装置。

【請求項17】 前記給送手段は、手差し給紙部であることを特徴とする請求項16記載のカラー画像形成装置。

【請求項18】 前記給送手段は前記白黒画像形成装置に設けられ、前記カラー画像形成手段によって予め画像形成されたシートを給送するものであって、

整理番号: 特願2002-193598 提出日:平成17年10月11日 4

前記受信手段によって受信した前記画像情報に基づいて、受信したページがカラーページであるか白黒ページであるかを判定する判定手段を有し、

前記判定手段の判定結果によって受信したページが白黒であるかカラーであるかを判定することを特徴とする請求項16記載のカラー画像形成装置。

【請求項19】 前記給送手段は前記カラー画像形成装置に設けられ、前記白黒画像形成手段によって予め画像形成されたシートを給送するものであり、

前記受信手段はカラーページであるか白黒ページであるかの情報を受信するものであって、

シートを積載する積載手段と、

前記受信手段によって受信した情報に基づいて、カラーページか白黒ページかを判定する判定手段とを有するカラー画像形成装置であって、

前記判定手段によって1枚のシートにカラーページのみが画像形成されると判断した場合、前記積載手段からシートを給送して前記カラー画像形成手段によってシートに画像を形成し、

前記判定手段によって1枚のシートに白黒ページのみが画像形成されると判断した場合、前記給送手段から前記白黒画像が形成されているシートを給送し、

前記判定手段によって1枚のシートにカラーページと白黒ページの両方が存在すると判断した場合、前記給送手段によってシートを給送した後に、カラーページを前記カラー画像形成手段によって画像形成することを特徴とする請求項16記載のカラー画像形成装置。

【請求項20】 カラー画像形成手段を有するカラー画像形成装置とネットワークを介して接続される白黒画像形成装置において、

シートに白黒画像を形成する白黒画像形成手段と、

画像情報を受信する受信手段と、

1枚のシートにカラーページと白黒ページが画像形成される場合、前記白黒画像形成手段によって画像形成しない第1のモードと、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべき白黒ページのみを前記白黒画像形成手段によって画像形成する第2のモードのいずれかを選択する選択手段とを有し、

前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、前記カラー画像形成手段を通過させて混交する場合は前記第2のモードを選択することを特徴とする白黒画像形成装置。

【請求項21】 前記白黒画像形成手段により画像形成されるべきあるいは画像形成されたシート、及びカラー画像形成装置に設けられているカラー画像形成手段により画像形成されるべきあるいは画像形成されたシートとは合流パスで合流し、

前記カラー画像形成手段によって予め画像形成されたシート、または前記白黒画像形成手段によって予め画像形成されたシートは、給送手段によって前記合流パスまで給送されるものであって、

前記受信手段はどの給送手段を用いるのかを表す給送手段情報を受信し、

前記選択手段は、前記受信手段が受信した前記給送手段情報に応じて前記第1のモード及び前記第2のモードのいずれかを選択することを特徴とする請求項20記載の白黒画像形成装置。

【請求項22】 前記カラー画像形成手段によって画像形成されるべきシート、及び前記白黒画像形成手段によって画像形成されるべきシートが、共に画像形成完了後に合流する位置に前記合流パスが存在し、

前記合流パスまでシートを給送する前記給送手段を使用する場合は、前記選択手段は前記第1のモードを選択することを特徴とする請求項21記載の白黒画像形成装置。

【請求項23】 前記給送手段は、インサータ及びコレータのいずれかであることを特徴とする請求項22記載の白黒画像形成装置。

【請求項24】 前記給送手段は前記カラー画像形成装置に設けられ、前記白黒画像

整理番号: 特願2002-193598 提出日:平成17年10月11日 5

形成手段によって予め画像形成されたシートを給送するものであって、

前記受信手段によって受信した前記画像情報に基づいて、受信したページがカラーページであるか白黒ページであるかを判定する判定手段を有し、

前記判定手段の判定結果によって受信したページが白黒であるかカラーであるかを判定することを特徴とする請求項2記載の白黒画像形成装置。

【請求項25】 前記給送手段は前記白黒画像形成装置に設けられ、前記カラー画像形成手段によって予め画像形成されたシートを給送するものであり、

前記受信手段はカラーページであるか白黒ページであるかの情報を受信するものであって、

シートを積載する積載手段と、

前記受信手段によって受信した情報に基づいて、カラーページか白黒ページかを判定する判定手段とを有する白黒画像形成装置において、

前記判定手段によって1枚のシートに白黒ページのみが画像形成されると判断した場合、前記積載手段からシートを給送して前記白黒画像形成手段によってシートに画像を形成し、

前記判定手段によって1枚のシートに白黒ページのみが画像形成されると判断しなかった場合、前記給送手段によって前記カラー画像が形成されているシートを給送することを特徴とする請求項2記載の白黒画像形成装置。

【請求項26】 前記カラー画像形成手段によって画像形成されるべきシート、及び前記白黒画像形成手段によって画像形成されるべきシートのいずれかが、画像形成完了前に合流する位置に前記合流パスが存在し、

前記合流パスまでシートを給送する前記給送手段を用いる場合は、前記選択手段は前記第2のモードを選択することを特徴とする請求項21記載の白黒画像形成装置。

【請求項27】 前記給送手段は、手差し給紙部であることを特徴とする請求項26記載の白黒画像形成装置。

【請求項28】 前記給送手段は前記カラー画像形成装置に設けられ、前記白黒画像形成手段によって予め画像形成されたシートを給送するものであって、

前記受信手段によって受信した前記画像情報に基づいて、受信したページがカラーページであるか白黒ページであるかを判定する判定手段を有し、

前記判定手段の判定結果によって受信したページが白黒であるかカラーであるかを判定することを特徴とする請求項26記載の白黒画像形成装置。

【請求項29】 前記給送手段は前記白黒画像形成装置に設けられ、前記カラー画像形成手段によって予め画像形成されたシートを給送するものであり、

前記受信手段はカラーページであるか白黒ページであるかの情報を受信するものであって、

シートを積載する積載手段と、

前記受信手段によって受信した情報に基づいて、カラーページか白黒ページかを判定する判定手段とを有する白黒画像形成装置であって、

前記判定手段によって1枚のシートに白黒ページのみが画像形成されると判断した場合、前記積載手段からシートを給送して前記白黒画像形成手段によってシートに画像を形成し、

前記判定手段によって1枚のシートにカラーページのみが画像形成されると判断した場合、前記給送手段から前記カラー画像が形成されているシートを給送し、

前記判定手段によって1枚のシートにカラーページと白黒ページの両方が存在すると判断した場合、前記給送手段によってシートを給送した後に、白黒ページを前記白黒画像形成手段によって画像形成することを特徴とする請求項26記載の白黒画像形成装置。

整理番号: 特願2002-193598 提出日:平成17年10月11日 6

【手続補正2】

【補正対象書類名】 明細書

【補正対象項目名】 0004

【補正方法】 変更

【補正の内容】

【0004】

【課題を解決するための手段】

上記問題点に鑑み、本発明は、カラー画像形成装置と白黒画像形成装置とから成る画像形成システムにおいて、前記カラー画像形成装置でカラーの画像を形成するカラー画像形成手段と、前記白黒画像形成装置で白黒の画像を形成する白黒画像形成手段と、入力されたカラーページと白黒ページが混在するジョブの各ページに関し、カラーページか白黒ページかを判定する判定手段と、前記判定手段の判定結果に応じて、前記カラーページは前記カラー画像形成手段により画像形成させ、前記白黒ページは前記白黒画像形成手段により画像形成させる制御手段と、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきすべてのページを前記カラー画像形成手段で画像形成する第1のモード、及び1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきカラーページは前記カラー画像形成手段で画像形成し、そのシート上に画像形成されるべき白黒ページは前記白黒画像形成手段で画像形成する第2のモードのいずれかを選択する選択手段とを有し、前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、画像形成位置を通過させて混交する場合は前記第2のモードを選択することを特徴とする画像形成システムを提供するものである。

【手続補正3】

【補正対象書類名】 明細書

【補正対象項目名】 0005

【補正方法】 変更

【補正の内容】

【0005】

また、本発明は、カラー画像形成装置と白黒画像形成装置とから成る画像形成システムの制御方法において、前記カラー画像形成装置でカラーの画像を形成するカラー画像形成ステップと、前記白黒画像形成装置で白黒の画像を形成する白黒画像形成ステップと、入力されたカラーページと白黒ページが混在するジョブの各ページに関し、カラーページか白黒ページかを判定する判定ステップと、前記判定ステップの判定結果に応じて、前記カラーページは前記カラー画像形成ステップにより画像形成させ、前記白黒ページは前記白黒画像形成ステップにより画像形成させる制御ステップと、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきすべてのページを前記カラー画像形成ステップで画像形成する第1のモードと、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきカラーページは前記カラー画像形成ステップで画像形成し、そのシート上に画像形成されるべき白黒ページは前記白黒画像形成ステップで画像形成する第2のモードのいずれかを選択する選択ステップとを有し、前記選択ステップは、前記カラー画像形成ステップ又は前記白黒画像形成ステップにより予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、画像形成位置を通過させて混交する場合は前記第2のモードを選択することを特徴とする画像形成システムの制御方法を提供するものである。

整理番号:

特願2002-193598

提出日:平成17年10月11日

7

【手続補正4】

【補正対象書類名】 明細書
【補正対象項目名】 0006
【補正方法】 変更
【補正の内容】
【0006】

また、本発明は、白黒画像形成手段を有する白黒画像形成装置とネットワークを介して接続されるカラー画像形成装置において、シートにカラー画像を形成するカラー画像形成手段と、画像情報を受信する受信手段と、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきすべてのページを前記カラー画像形成手段によって画像形成する第1のモードと、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきカラーページのみを前記カラー画像形成手段によって画像形成する第2のモードのいずれかを選択する選択手段とを有し、前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、画像形成位置を通過させて混交する場合は前記第2のモードを選択することを特徴とするカラー画像形成装置を提供するものである。

【手続補正5】

【補正対象書類名】 明細書
【補正対象項目名】 0007
【補正方法】 変更
【補正の内容】
【0007】

また、本発明は、カラー画像形成手段を有するカラー画像形成装置とネットワークを介して接続される白黒画像形成装置において、シートに白黒画像を形成する白黒画像形成手段と、画像情報を受信する受信手段と、1枚のシートにカラーページと白黒ページが画像形成される場合、前記白黒画像形成手段によって画像形成しない第1のモードと、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべき白黒ページのみを前記白黒画像形成手段によって画像形成する第2のモードのいずれかを選択する選択手段とを有し、前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、前記カラー画像形成手段を通過させて混交する場合は前記第2のモードを選択することを特徴とする白黒画像形成装置を提供するものである。

【手続補正6】

【補正対象書類名】 明細書
【補正対象項目名】 0008
【補正方法】 削除

【手続補正7】

【補正対象書類名】 明細書
【補正対象項目名】 0009
【補正方法】 削除

整理番号: 特願2002-193598 提出日: 平成17年10月11日 8/E

【手続補正8】

【補正対象書類名】 明細書
【補正対象項目名】 0010
【補正方法】 削除

【手続補正9】

【補正対象書類名】 明細書
【補正対象項目名】 0011
【補正方法】 削除

【手続補正10】

【補正対象書類名】 明細書
【補正対象項目名】 0127
【補正方法】 変更
【補正の内容】

【0127】

【発明の効果】

以上説明したように、請求項1記載の発明によれば、1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきすべてのページを前記カラー画像形成手段で画像形成する第1のモード、及び1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきカラーページは前記カラー画像形成手段で画像形成し、そのシート上に画像形成されるべき白黒ページは前記白黒画像形成手段で画像形成する第2のモードのいずれかを選択する選択手段を有し、選択手段は、カラー画像形成手段又は白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は第1のモードを選択し、画像形成位置を通過させて混交する場合は第2のモードを選択するので、1枚のシートにカラーページと白黒ページの両方が画像形成される場合に、当該シートに対する画像形成を、カラー画像形成装置と白黒画像形成装置の両方により行うか、カラー画像形成装置により行うかを自動で選択することが可能になり、カラーページと白黒ページを丁合するあらゆる方法に対応することが可能になる。

【手続補正11】

【補正対象書類名】 明細書
【補正対象項目名】 0131
【補正方法】 変更

【補正の内容】

【0131】

また、請求項9、10、20記載の発明においても、請求項1と同様の効果が得られる。

[Name of Document] Argument

[Date of Submission] October 11, 2005

[Addressee] Examiner of the Patent Office,
 Tsuyoshi NAKADA

[Description of the Case]

 [Application No.] Patent Application No. 2002-193598

[Applicant for Patent]

 [Id. No.] 000001007

 [Address] 30-2, Shimomaruko 3-chome, Ohta-ku,
 Tokyo

 [Name] CANON KABUSHIKI KAISHA

 [Representative] Fujio MITARAI

 [Phone No.] 03-3758-2111

[Agent]

 [Id. No.] 100090538

 [Address] c/o CANON KABUSHIKI KAISHA, 30-2,
 Shimomaruko 3-chome, Ohta-ku, Tokyo

 [Patent Attorney]

 [Name] Keizo NISHIYAMA

 [Phone No.] 03-3758-2111

[Dispatch No.] 294430

[Content of Argument]

(1) With regard to Reasons for Refusal

 The Examiner found in the notification of reasons for
 refusal dated (dispatched) August 9, 2005 that the subject

application should be rejected over the cited documents since it could have easily been made by a person skilled in the art.

Specifically, Cited Document 1 (Japanese Patent Laid-Open No. 2000-222148) discloses a system in which in a case where a color page and a black-and-white page are to be formed on a single sheet, an image for the color page is formed by a printer and an image for the remaining page is formed by a black-and-white printer, and Cited Document 2 (Japanese Patent Laid-Open No. 2002-86852) discloses a technique in which in a case where a color page and a black-and-white page are to be formed on a single sheet, images for all the pages are formed by a color printer. It is therefore found that the subject application could have easily been made by a person skilled in the art based on Cited Documents 1 and 2.

In response, the applicant amends the claims in the amendment filed herewith on the same date, and will argue a statement based on the amendment above.

(2) Features of Invention of Subject Application

Claim 1 is amended as below according to the amendment above. Claims 9, 10, and 20, which are other independent claims, are also amended in a similar manner.

[Claim 1] An image formation system including a color

image formation apparatus and a black-and-white image formation apparatus, the image formation system comprising:

color image forming means for forming a color image using the color image formation apparatus;

black-and-white image forming means for forming a black-and-white image using the black-and-white image formation apparatus;

determining means for determining whether each of pages in an input job in which both a color page and a black-and-white page exist is a color page or a black-and-white page;

controlling means for controlling the color image forming means to form an image for the color page and controlling the black-and-white image forming means to form an image for the black-and-white page according to the determination result of the determining means; and

selecting means for selecting one of a first mode and a second mode, the first mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, images for all the pages to be formed on the single sheet are formed by the color image forming means, the second mode being a mode in which, in a case where both a color page and a black-and-white page are to be formed on a single sheet, an image for the color page to be formed on the single sheet is formed by the color image forming means and an image for the black-and-white

page to be formed on the single sheet is formed by the black-and-white image forming means,

wherein the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position.

(3) Grounds for Amendment

In the amendment of Claim 1, the description, which reads "the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position", is added. This corresponds to the description in paragraphs [0085] to [0096]. That is, the first mode is selected in a case where sheets are mixed without passing through an image forming position, such as in a case where an inserter or a collator is used, and the second mode is selected in a case where sheets are mixed after passing through the image forming position, such as in a case where a hand feed tray is used.

Specifically, when both a color page and a black-and-white page are to be formed on a single sheet, the case where sheets are mixed using an inserter or a collator corresponds to the description, which reads "all pages are printed by the color MFP 104" (paragraph [0087]), and the case where sheets are mixed using a hand feed tray corresponds to the description, which reads "only color pages are printed by the color MFP 104" (paragraph [0094]).

Claims 9, 10, and 20 are also amended in a similar manner to that of Claim 1. Claims 10 and 20 are amended so that the color image formation apparatus and the black-and-white image formation apparatus are connected via a network because, as is apparent from Fig. 1, the color MFP 104 and the black-and-white MFP 105 are connected via the network 101.

Claims 30 through 33 are canceled.

Other amendments to [Means for Solving the Problems] and [Advantages] are made for consistency with the amendments made to [Claims]

Accordingly, the amendments are made within the scope of the specification as originally filed, and will be acceptable since no new matter is added.

(4) Comparison with Cited Documents

Cited Document 1 (Japanese Patent Laid-Open No. 2000-

222148) discloses a structure in which in a case where a color page and a black-and-white page are to be formed on a single sheet, an image for the color page is formed by a color printer and an image for the remaining page is formed by a black-and-white printer.

Cited Document 2 (Japanese Patent Laid-Open No. 2002-86852) discloses a structure in which in a case where a color page and a black-and-white page are to be formed on a single sheet, images for all the pages are formed by a color printer.

However, even if the invention disclosed in Cited Document 1 and the invention disclosed in Cited Document 2 are combined, an image formation system having the "first mode" and "second mode" in the invention of the subject application is merely disclosed, and there is no disclosure or suggestion of which mode is selected in what circumstances.

That is, Cited Documents 1 and 2 do not disclose or suggest that "the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position".

Therefore, even if Cited Documents 1 and 2 are combined, the advantage specific to the invention of the subject application that "in a case where both a color page and a black-and-white page are to be formed on a single sheet, it is possible to automatically select both the color image formation apparatus and the black-and-white image formation apparatus or the color image formation apparatus to form images on that sheet, and the present invention can handle any method for collating color pages and black-and-white pages" cannot be achieved.

Cited Document 3 (Japanese Patent Laid-Open No. 2000-112688) and Cited Document 4 (Japanese Patent Laid-Open No. 2002-157102) disclose a structure in which the same job is transmitted to a color printer and a black-and-white printer.

However, also with regard to Cited Documents 3 and 4, it is not disclosed or suggested that "the selecting means selects the first mode when sheets having images formed thereon beforehand by the color image forming means or the black-and-white image forming means are mixed without passing through an image forming position, and selects the second mode when the sheets are mixed after passing through the image forming position".

(5) Conclusion

Therefore, we believe that the invention of the subject

application could not have easily been made based on Cited Documents 1 through 4. Thus, we respectfully request you to perform further examination and to grant a patent for the invention of the subject application.

整理番号: 特願2002-193598 提出日:平成17年10月11日 1

【書類名】 意見書
【提出日】 平成17年10月11日
【あて先】 特許庁審査官 中田 剛史 殿
【事件の表示】
【出願番号】 特願2002-193598
【特許出願人】
【識別番号】 000001007
【住所又は居所】 東京都大田区下丸子3丁目30番2号
【氏名又は名称】 キヤノン株式会社
【代表者】 御手洗 富士夫
【電話番号】 03-3758-2111
【代理人】
【識別番号】 100090538
【住所又は居所】 東京都大田区下丸子3丁目30番2号キヤノン株式会社内
【弁理士】
【氏名又は名称】 西山 恵三
【電話番号】 03-3758-2111
【発送番号】 294430
【意見の内容】
(1) 拒絶理由について
審査官殿は、平成17年8月9日（発送日）付拒絶理由通知書において、本出願は引用文献に基づいて当業者が容易に発明できたものであることから、拒絶をすべきものであると認定されました。
具体的には、引用文献1（特開2000-222148号公報）には、1枚のシートにカラーページと白黒ページが形成される場合、カラーページはカラープリンタで画像形成し、残りを白黒プリンタで画像形成するシステムが記載されており、引用文献2（特開2002-86852号公報）には、1枚のシートにカラーページと白黒ページが形成される場合、カラープリンタで全てのページを画像形成する技術が記載されていることから、本出願は引用文献1及び2に基づいて当業者が容易に発明できたものであると認定されました。
これに対して、出願人は、本日同時提出の手續補正書により特許請求の範囲を補正致しましたので、この補正書に基づいて意見を申し上げます。
(2) 本願発明の特徴
上記手續補正書により、請求項1を以下のように補正致しました。なお、他の独立請求項である、請求項9、10及び20につきましても、同様の補正を行っています。
【請求項1】 カラー画像形成装置と白黒画像形成装置とから成る画像形成システムにおいて、
前記カラー画像形成装置でカラーの画像を形成するカラー画像形成手段と、
前記白黒画像形成装置で白黒の画像を形成する白黒画像形成手段と、
入力されたカラーページと白黒ページが混在するジョブの各ページに関し、カラーページか白黒ページかを判定する判定手段と、
前記判定手段の判定結果に応じて、前記カラーページは前記カラー画像形成手段により画像形成させ、前記白黒ページは前記白黒画像形成手段により画像形成させる制御手段と、
1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきすべてのページを前記カラー画像形成手段で画像形成する第1のモード、及び1枚のシートにカラーページと白黒ページが画像形成される場合、そのシート上に画像形成されるべきカラーページは前記カラー画像形成手段で画像形成し、そのシート上に画像形成されるべき白黒ページは前記白黒画像形成手段で画像形成する第2のモードのい

整理番号: 特願2002-193598 提出日:平成17年10月11日 2

ずれかを選択する選択手段とを有し、

前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、画像形成位置を通過させて混交する場合は前記第2のモードを選択することを特徴とする画像形成システム。

(3) 補正の根拠

請求項1の補正において、「前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、画像形成位置を通過させて混交する場合は前記第2のモードを選択する」との記載を追加しました。これは、段落〔0085〕～〔0096〕の記載に対応します。すなわち、インサータやコレータを用いる場合のように画像形成位置を通過させずに混交する場合は第1のモードを選択し、手差しトレイを用いる場合のように画像形成位置を通過させて混交する場合は第2のモードを選択することに対応します。

具体的には、1枚のシートにカラーページと白黒ページの両方を画像形成する際、インサータ又はコレータを用いて混交する場合は「すべてのページをカラーMFP104によってプリント」(段落〔0087〕)し、手差しトレイを用いて混交する場合は「カラーページのみをカラーMFP104によってプリント」(段落〔0094〕)するとの記載に対応します。

請求項9、10及び20につきましても、請求項1と同様の補正を行っています。なお、請求項10及び20には、カラー画像形成装置と白黒画像形成装置がネットワークを介して接続されている旨の補正を行っていますが、これは図1から明らかなように、カラーMFP104と白黒MFP105がネットワーク101を介して接続されていることに対応します。

また、請求項30～33は削除しました。

その他、〔課題を解決するための手段〕及び〔発明の効果〕における補正は、〔特許請求の範囲〕の補正内容との整合性をとるための補正であります。

以上のように、本補正は当初明細書の範囲内においてしたものであり、新規事項の追加には該当しないことから、適法な補正といえます。

(4) 引用文献との比較

引用文献1(特開2000-222148号公報)には、1枚のシートにカラーページと白黒ページが形成される場合、カラーページはカラープリンタで画像形成し、残りを白黒プリンタで画像形成する構成が開示されています。

引用文献2(特開2002-86852号公報)には、1枚のシートにカラーページと白黒ページが形成される場合、カラープリンタで全てのページを画像形成する構成が開示されています。

しかしながら、引用文献1に記載された発明、及び引用文献2に記載された発明を組み合わせたとしても、せいぜい本願発明における「第1のモード」と「第2のモード」を有する画像形成システムが開示されているというに過ぎず、どのような場合にどちらのモードを選択するかについては開示も示唆もなされていません。

すなわち、引用文献1及び2には、「前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させずに混交する場合は前記第1のモードを選択し、画像形成位置を通過させて混交する場合は前記第2のモードを選択する」とことについて開示も示唆もなされていません。

従いまして、たとえ引用文献1と2を組み合わせたとしても、「1枚のシートにカラーページと白黒ページの両方が画像形成される場合に、当該シートに対する画像形成を、カラー画像形成装置と白黒画像形成装置の両方により行うか、カラー画像形成装置により行うかを自動で選択することが可能になり、カラーページと白黒ページを丁合するあらゆる方法に対応することが可能になる」という本願発明特有の効果を奏することはできません

整理番号: 特願2002-193598 提出日:平成17年10月11日 3/E

。引用文献3（特開2000-112688号公報）及び引用文献4（特開2002-157102号公報）には、カラープリンタと白黒プリンタに同じジョブを送信する構成が開示されています。

しかしながら、引用文献3及び4についても同様に、「前記選択手段は、前記カラー画像形成手段又は前記白黒画像形成手段により予め画像形成されたシートを、画像形成位置を通過させて混交する場合は前記第1のモードを選択し、画像形成位置を通過させずに混交する場合は前記第2のモードを選択する」ことについて開示も示唆もなされていません。

（5）むすび

以上のことから、本願発明は引用文献1～4に基づいて容易に発明できたものではないと思料致します。したがって、再度の御審査により本願発明に特許査定を賜りたく、お願い申し上げます。

Reference No. 4650104 Dispatch No. 121701

Dispatch Date: March 28, 2006

Decision to Grant a Patent

Patent Application No.	2002-193598
Drafting Date	March 23, 2006
JPO Examiner	Tsuyoshi NAKADA 2951 5E00
Title of the Invention	IMAGE FORMATION SYSTEM, CONTROL METHOD FOR IMAGE FORMATION SYSTEM, COLOR IMAGE FORMATION APPARATUS, BLACK-AND-WHITE IMAGE FORMATION APPARATUS, AND PROGRAM
Number of Claims	29
Applicant	CANON KABUSHIKI KAISHA
Agent	Keizo NISHIYAMA (one other)

This patent application is to be granted a patent,
since no reason for refusal has been found.

I certify that matters described above are identical with
those recorded on the file.

Date of certification: March 24, 2006

Administrative Official of Ministry of Economy, Trade and
Industry: Emiko HIRASE

Remark: It is necessary to pay the annual fee within 30 days
from the date of receipt of this document.

整理番号:4650104 発送番号:121701 発送日:平成18年 3月28日 1/E

特許査定

特許出願の番号	特願2002-193598
起案日	平成18年 3月23日
特許庁審査官	中田 剛史 2951 5E00
発明の名称	画像形成システム、画像形成システムの制御方法、カラー画像形成装置、白黒画像形成装置、及びプログラム
請求項の数	29
特許出願人	キヤノン株式会社
代理人	西山 恵三 (外 1名)

この出願については、拒絶の理由を発見しないから、特許査定する。

上記はファイルに記録されている事項と相違ないことを認証する。

認証日 平成18年 3月24日 経済産業事務官 平瀬 恵美子

注意：この書面を受け取った日から30日以内に特許料の納付が必要です。